

REMARKS

Claims 1-26 are rejected. Claims 1 and 2 have been amended.

Claims 1-26 are presently pending in the application. The basis for the amendment of claims 1 and 2 is claim 1 as originally filed to correct a discrepancy in the antecedent basis. Favorable reconsideration of the application in view of the following remarks is respectfully requested.

Rejection Of Claims 1-26 Under 35 U.S.C. §103(a):

The Examiner has rejected Claims 1-26 under 35 U.S.C. 103(a) as being unpatentable over Campbell (5,612,283) in view of Dalvey et al (6,753,050 or 6,884,311), indicating that Campbell discloses a dye-receiving element for thermal dye transfer comprising a support having on the front side thereof, in order, a biaxially-oriented composite film laminated thereto and a dye image-receiving layer, the composite film comprising a microvoided thermoplastic core layer and at least one substantially void-free thermoplastic surface layer, the support having on the back side thereof a biaxially-oriented transparent film laminated thereto which has a light transmission of at least 70%, the ratio of thickness of the transparent film to the composite film being from about 0.45 to about 0.75, the low specific gravity of microvoided packaging films (preferably between 0.3-0.7 g/cm.³) produces dye-receivers that are very conformable and results in low mottle-index values of thermal prints, these microvoided packaging films also are very insulating and produce dye-receiver prints of high dye density at low energy levels, the nonvoided skin produces receivers of high gloss and helps to promote good contact between the dye-receiving layer and the dye-donor film. This also enhances print uniformity and efficient dye transfer, and, in products made by a typical extrusion lamination process, back printing labels, water marks and logos are applied directly to the back side of the paper support stock with inks applied by a gravure printing process, making it desirable to have such "back printing" indicia be visible, however, the reference is not specific as to the method of printing the indicia. The Examiner then indicates that Dalvey et al disclose an image transfer sheet comprises a release layer and a polymer layer with one or more of the release layer and a polymer layer of titanium oxide or other white pigment, one embodiment comprises a method for transferring an image to a colored substrate by providing an image transfer sheet comprising a release layer and an image-imparting layer that comprises a

polymer, contacting the image transfer sheet to the colored substrate, applying heat to the image transfer sheet so that an image is transferred from the image transfer sheet to the colored substrate, producing a white or luminescent background and indicia, in another embodiment, the invention includes an image transfer sheet, which may be a polymer containing titanium oxide or other white pigment or luminescent pigment, one other embodiment of the invention includes a method for making an image transfer sheet by providing an ink receptive polymer and impregnating the polymer with titanium oxide or other white pigment or luminescent pigment wherein an image is imparted to the polymer, in other embodiments of the image transfer sheet, a changeable color which changes the image transfer sheet from colorless to one or more of yellow, orange, red, rose, red, violet, magenta, black, brown, mustard, taupe, green or blue. The Examiner then indicates that, given the teachings of the references, it would have been obvious to one of ordinary skill in the art to prepare the material of Campbell choosing to employ the improved method of forming an indicia taught by Dalvey et al with reasonable expectation of achieving a support having good light transmission.

Campbell discloses a dye-receiving element for thermal dye transfer comprising a support having on the front side thereof, in order, a biaxially-oriented composite film laminated thereto and a dye image-receiving layer, the composite film comprising a microvoided thermoplastic core layer and at least one substantially void-free thermoplastic surface layer, the support having on the back side thereof a biaxially-oriented transparent film laminated thereto which has a light transmission of at least 70%, the ratio of thickness of the transparent film to the composite film being from about 0.45 to about 0.75. Campbell, col.2, lines 17-21, indicates "In products made by a typical extrusion lamination process, back printing labels, water marks and logos are applied directly to the back side of the paper support stock with inks applied by a gravure printing process. It would be desirable to have such "back printing" indicia be visible."

Dalvey '050 discloses an image transfer sheet with an image imparting layer and an adhesive layer to permit transfer of an image to a substrate without substantial application of heat. The image to be transferred has been pre-

formed and is either pre-printed onto the polymer layer or has been pre-printed onto a second ink receiving layer. (col. 6, lines 34-37)

Dalvey '311 discloses an image transfer sheet having a release layer and a polymer layer in which one or more of the release layer and the polymer layer comprise titanium oxide or other white pigment for use in transferring an image onto a colored base and to an article comprising a dark base and an image with a light background on the base. Again a preformed image is described, not the use of a thermal transfer donating sheet which produces an image directly on a substrate in the form of the pattern of energy applied to the donating sheet.

The present invention relates to a method for placing indicia on the non-image side of a support for an imaging element comprising providing a support, which has an image side having at least one imaging layer and a non-image side, contacting the non-image side of the support with a thermal transfer donating sheet, applying energy in a pattern to the thermal transfer dye donating sheet, and transferring the dye from the dye donating sheet to the non-image side of the support in the energy pattern to form indicia.

To establish a *prima facia* case of obviousness requires, first, there must be some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

Campbell, col.2, lines 17-21, indicates back printing labels, water marks and logos are applied directly to the back side of the paper support stock with inks applied by a gravure printing process, but fails to mention back printing via a thermal transfer donating sheet which, upon patterned application of energy, provides dye to a substrate which dye then forms a pattern on the substrate. Campbell mentions thermal printing, but only to impart an image to the front-side dye receiving element, not the non-image side of the support. (col. 5, lines 29-31; Abstract ("A dye-receiving element for thermal dye transfer comprising a support

having on the front side thereof, in order, a biaxially-oriented composite film laminated thereto and a dye image-receiving layer,")) Dalvey '050 indicates that the receiver and other layers are actually transferred to the substrate, not just dye in the shape of the pattern of energy applied to the thermal transfer donating sheet. Also, the thermal transfer donating sheet of the present invention contains no image or indicia. See Dalvey '050, col. 5, line 60 – col. 6, line 49 ("To make the image transfer sheet, the release layer and polymer layer may be separately extruded onto the base paper layer or may be co-extruded. ... The polymer is co-extruded against the release layer 12. The polymer layer 18 is coated with an ink-receiving layer 20. The ink-receiving layer is, for some embodiments, printed with indicia using ink from an ink-jet printer. For other embodiments, indicia are applied with a laser printer or by thermal transfer application. For other embodiments, the polymer layer 18 is not coated with an ink receiving layer. A second ink-receiving layer is optionally coated over the first receiving layer, depending upon the type of final image desired. ... The image transfer sheet is applied to a substrate by separating the polymer and ink-receiving layers and adhesive layer from the base paper and release layer. The adhesive layer contacts the substrate and adheres the polymer and ink-receiving layers to the substrate. ... To transfer an image from the image transfer sheet of the present invention 10 to a substrate, the base layer 12 is peeled away from the rest of the sheet. For embodiments such as is shown in FIG. 1, the base layer is peeled away at the release layer 14. For embodiments such as is shown in FIG. 2, the base layer 12 is peeled at the resin or polymer layer 13. ... Separation of the base layer 12 exposes the adhesive layer 16. Once separated and exposed, the adhesive layer 16 is positioned to contact the substrate. Pressure is applied as needed to adhere the image to the substrate. The image has, as discussed, been pre-printed onto the polymer layer 20 and, for some embodiments, has been pre-printed onto a second ink receiving layer. For embodiments with no adhesive, transfer occurs by use of an iron that applies heat to the substrate receiving the image and the image. A heat press is also usable.") Dalvey '311 teaches the formation of an image on a sheet, followed by transfer of the pre-formed image to a substrate. See Fig. 1. Dalvey '311 indicates that the image is present on the image transfer device and is then transferred to the substrate. (See col. 3, lines 17-19: "As used herein, the term "indicia" refers to an image disposed on the image transfer device of the

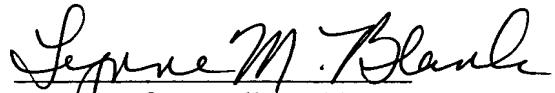
present invention in conjunction with a substantially white background. Indicia include letters, figures, photo-derived images and video-derived images.”; see also col. 9, lines 1-16). Example 1 of Dalvey, col. 9, lines 51-64, indicates “The EAA layer is coated with ink jet receptive layers and then printed on an ink jet printer. The print is then removed from the release layer to expose the print. The exposed print is applied against fabric and covered by release paper, wherein the release side contacts the printed side. The printed image is transferred by heat application with pressure”. Again, the image is applied to the transfer sheet, then to the support, not by direct transfer of dye which results in the image / pattern formation directly on the support. Claim 1 of US 6884311 also states that the image-imparting layer “comprises a polymer that includes indicia. None of the cited references suggest, teach or disclose a thermal transfer donating sheet to which a pattern of energy is applied, resulting in the transfer of dye from the dye donating sheet to the non-image side of the support in the energy pattern to form indicia. Therefore, the references fail to provide any motivation for the present thermal transfer method.

Neither do Campbell or Dalvey provide a likelihood of success for the use of a thermal transfer donating sheet to which a pattern of energy is applied, resulting in the transfer of dye from the dye donating sheet to the non-image side of the support in the energy pattern to form indicia. At best, the combination of the references would provide a gravure printed backside of a support or a gravure printed transfer sheet used to then transfer the gravure-printed image to the backside of a support.

In addition, neither Campbell or the Dalvey references mention placing indicia on the non-image side of a support for an imaging element comprising via contacting the non-image side of a support with a thermal transfer dye donating sheet; applying energy in a pattern to the thermal transfer dye donating sheet to transferring dye in a pattern to the support to form indicia.

It is believed that the foregoing is a complete response to the Office Action and that the claims are in condition for allowance. Favorable reconsideration and early passage to issue is therefore earnestly solicited.

Respectfully submitted,



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